DOCUMENT RESUME

ED 323 285 UD 027 641

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TITLE	Report of the Title I/Chapter 1 Services Received by Graduates of the Columbus Public Schools.
INSTITUTION	Columbus Public Schools, Ohio.
PUB DATE	Aug 90
NOTE	29p.
AVAILABLE FROM	Columbus Public Schools, Dept. of Program Evaluation, 52 Starling Street, Columbus, Ohio 43215.
PUB TYPE	Reports - Evaluative/Feasibility (142)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	*Attendance Patterns; Compensatory Education; *Educationally Disadvantaged; Elementary Secondary Education; *Ethnic Distribution; Federal Programs; *High School Graduates; Program Evaluation; School Demography; *Student Participation; Urban Schools
IDENTIFIERS	*Columbus Public Schools OH; *Education Consolidation Improvement Act Chapter 1

ABSTRACT

This study examines the involvement of the 3,234 students who graduated from the Columbus (Ohio) Public Schools in 1988 in compensatory education programs funded under Chapter 1 of the Education Consolidation and Improvement Act. Program involvement is categorized as either program service or program treatment based on attendance. A student who has been involved in a program but has not met the program's attendance criterion is categorized as having received program service. A student who has been served by a Title I/Chapter 1 program and who has met the program's attendance criterion is categorized as having received program treatment. The following summary findings are reported: (1) more than one-fourth of all graduates received program service and almost one-fourth received program treatment; (2) the 903 students who received program service were involved with a program for an average of 2.2 years; (3) the 799 students who received program treatment were involved with a program for an average of 2.0 years; and (4) patterns of program service and program treatment varied greatly. Statistical data are included on 26 tables. Data includes the overall gender and ethnic distribution of 1988 Columbus public school graduates, as well as information on students in the programs. (FMW)

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ED323285

Report of the Title I/Chapter 1 Services Received by Graduates of the Columbus Public Schools

August 1990

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UD 027 641

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Abstract

Introduction: The Department of Program Evaluation of the Columbus Public Schools received a grant to study the involvement of 1988 graduates of the Columbus Public Schools in Title I/Chapter 1 programs during their educational careers. Title I/Chapter 1 program involvement is separated into the categories of program service and program treatment on the basis of pupil attendance. A pupil who is served by Title I/Chapter 1 and who also meets the program attendance criterion is said to have received program treatment.

Research Questions: The following research questions have been identified for this study. What portion of the 1988 graduates received Title I/Chapter 1 service and treatment during their educational careers? How are their years of service and treatment distributed? Are there patterns of service and treatment provided to the 1988 graduates?

Method: For purposes of this study, students who graduated from high school during the winter, spring, and summer of 1988 were identified. Program Evaluation Department files for each year from 1975 through 1988 were searched to determine which graduates were served in or received the treatment of a Title I/Chapter 1 program during those years. A file containing service and treatment information about all graduates was compiled and analyzed to answer the research questions identified for this study.

Major Findings: Columbus Public Schools graduated 3,234 pupils during 1988. For the years during which these graduates were enrolled in the Columbus Public Schools, a variety of programs were available to them during kindergarten through grade 8 only. These include programs designed to improve either reading or mathematics achievement. District files reveal that 903 (27.4%) of the 3,234 graduates were served by a Title I/Chapter 1 program and that 799 (24.7%) received program treatment for at least one year. The maximum years of service and years of treatment were 9 and 8 respectively. More than half of the pupils receiving services were served during two or more years, and more than half of those receiving program treatment received multiple years of treatment.

Graduates exhibit 216 different patterns of grades during program services and 167 patterns during program treatment. One year of involvement during grade 6 was the most common pattern of service. This was the experience of 82 (9.1%) of the 903 pupils who received program service, followed by 66 (7.3%) whose service was during grade 1. These ranks were reversed in the category of program treatment. Of the 799 pupils who received program treatment, 84 (10.5%) did so in grade 1 while 82 (10.3%) did so in grade 6. When patterns are separated by level into elementary and middle school categories, those which dominate shift slightly. Grade 5 only is the most prominent of elementary service patterns comprising 95 (12.5%) of the 763 pupils with elementary service. Program treatment was received most frequently in grade 1. This was true for 96 (14.4%) of the 667 pupils with treatment during elementary school. Grades 4 and 5 becomes the most frequent of two-year service and treatment patterns and is exhibited by 48 (6.3%) of elementary served pupils and 36 (5.4%) of the elementary pupils receiving program treatment. One year of involvement at grade 6 is the most common of middle school service and treatment patterns. It is exhibited by 215 (53.2%) of the 404 graduates receiving middle school program services and by 182 (55.3%) of the 329 graduates receiving middle school program treatment.

Summary: More than one fourth of all 1988 graduates of Columbus Public Schools received Title I/Chapter 1 services during their educational careers, and almost one fourth received program treatment. For the 903 pupils who were served by a program, the average of their years of involvement was 2.2 years. For the 799 pupils who received program treatment, the average of their years of treatment was 2.0. Patterns of program service and treatment varied greatly. Approximately one tenth of all graduates who received program services did so only in grade 6, and no other grade pattern was as common. Slightly more than one tenth of those graduates who received program treatment did so only in grade 1, followed closely by those receiving treatment only in grade 6. For both service and treatment, the most often experienced grade pattern including more than one year was a combination of kindergarten and grade 1 and accounted for less than 4% of the graduates in each category.

Introduction

The Department of Program Evaluation of the Columbus Public Schools received a grant to study the involvement of 1988 graduates of the Columbus Public Schools in Title I/Chapter 1 programs during their educational careers. Title I/Chapter 1 program involvement is separated into the categories of program service and program treatment on the basis of pupil attendance. A pupil who is enrolled in a program and attends one or more days while the program is in operation is said to have received program service. A pupil who is served by Title I/Chapter 1 and who also meets the program attendance criterion is said to have received program treatment. Details regarding program availability during the years of this study are delineated in the major findings of this report.

Research Questions

The research questions identified for this study are as follows:

1. What portion of the 1988 graduates were served by Chapter 1 during their educational careers?

2. What portion of the 1988 graduates received Chapter 1 treatment during their educational careers?

3. What is the distribution of years of Chapter 1 services provided to 1988 graduates?

4. What is the distribution of years of Chapter 1 treatment provided to 1988 graduates?

5. Are there patterns of services provided to 1988 graduates?

6. Are there patterns of treatment provided to 1988 graduates?

Method

Data regarding the participation of students in compensatory programs for each school year are recorded on computer tape in the Program Involvement Files (PIF) system maintained by the Department of Program Evaluation of the Columbus Public Schools. Data maintained in the records of the PIF files identify students who receive service in Title I/Chapter 1 and provide the attendance information required to determine if each student attended the program for a sufficient period to be considered to have received program treatment.

For purposes of this study, students who graduated from high school during the winter, spring, and summer of 1988 were identified. The PIF files for each year from 1975 through 1988 were searched to determine which graduates were served in or received the treatment of a Title I/Chapter 1 program during those years. A file containing service and treatment information about all of the graduates was compiled and analyzed to answer the six research questions listed.

Major Findings

The Columbus Public Schools graduated 3,234 pupils during 1988. Demographic information about these pupils was obtained from the district's Student Master File and is summarized below.

Table 1

Gender and Ethnic Group Distribution
of 1988 Columbus Public Schools Graduates

Gender		Ethnic Group: Non-Minority	Black	Spanish Surname	Asian American	American Indian	Total: N	Total: %
Female		887	814	2	32		1735	53.6
Male		837	620	3	38	1	1499	46.4
Total	N	1724	1434	5	70	1	3234	
	%	53.3	44.3	.2	2.2	.0		100.0

Table 2

Year of Birth of 1988 Graduates

Year of Birth	Number of Pupils	Percent of Graduates
1950	1	.0
1960	1	.0
1964	1	.0
1965	2	.1
1966	1	.0
1967	23	.7
1968	170	5.3
1969	1101	34.0
1970	1914	59.2
1971	20	.6
Total	3234	100.0

For the years during which these pupils were enrolled in the Columbus Public Schools, a variety of programs were available to them. For ease of reading, school years will be designated by the year in which school ended. Thus, the 1976-77 school year will be termed as 1977 throughout this report. Program names, years offered, number of days of operation, and minimum days of attendance required for program treatment are displayed in Table 3. The table includes only those programs in which at least one of the 1988 graduates was enrolled. Of interest to the reader are the following facts about program offerings. Students qualify for compensatory education by scoring at or below the 36th percentile on a nationally standardized test of achievement in a

designated instructional area. Compensatory programs are provided at those buildings with the highest percentage of children from low income families. This limits program services to qualifying students who attend designated buildings. These building limitations affect the number of pupils served and, combined with student mobility, influence the treatment of served pupils. That is, a pupil receiving program services could attend school on 80% of program days but fail to meet the attendance criterion if a move placed the pupil at a building where services were not offered. The number of days of attendance required for program treatment was 70% of the days a program was in operation during 1975 and 1976 and increased to 80% for the remaining years. No Chapter 1 programs were offered at high school level (grades 9 through 12) during the years that these pupils were in high school. While programs were offered to assist pupils in reading or in mathematics, 1978 through 1981 were the only years during which these pupils were in grades at which mathematics programs were offered.

Table 3

Title I/Chapter 1 Programs
Which Served 1988 Graduates

Program Name	Year	Days of Program	Attendance Criterion
All Day Kindergarten	1975	168	118
	1976	167	117
Comprehensive Language Experiences and Reading (CLEAR) - Grades K-5	1975	173	121
	1976	172	120
	1977	151	121
	1978	127	102
	1979	128	102
	1980	140	112
	1981	135	108
	1982	139	111
CLEAR - Grades 6-8	1981	135	108
	1982	139	111
	1983	140	112
	1984	138	110
	1985	132	105
CLEAR Computer Assisted Instruction - Grades 6-8	1983	140	112
	1984	138	110
Basic Mathematics Improvement - Grades 4-6	1978	127	102
	1979	133	106
	1980	140	112
	1981	135	108

District files reveal that of the 3,234 graduates, 903 (27.9%) were served by a Title I/Chapter 1 program for one or more years and that 799 (24.7%) received program treatment. The years during which program involvement occurred were 1975 through 1985, inclusive. Table 4 provides gender and ethnic group distribution of the 903 graduates who received program services. A comparison of Tables 1 and 4 shows that of the 1,434 black students who graduated in 1988, 641 (44.7%) received program services. This is the highest percentage in any of the ethnic categories. Table 5 shows the years of birth of pupils who were served.

Table 4

Gender and Ethnic Group Distribution
of 1988 Graduates Served by Title I/Chapter 1

		Ethnic Group					Total	
Gender		Non-Minority	Black	Spanish Surname	Asian American	American Indian	N	%
Female		133	341		4		478	52.9
Male		120	300	1	4		425	47.1
Total	N	253	641	1	8		903	
	%	28.0	71.0	.1	.9			100.0

Table 5

Year of Birth of 1988 Graduates
Served by Title I/Chapter 1

Year of Birth	Number of Pupils	Percent of Graduates
1967	4	.4
1968	57	6.3
1969	377	41.7
1970	463	51.3
1971	2	.2
Total	903	100.0

The numbers of years of program service and treatment were distributed as shown in Table 6. Since both reading and mathematics programs were offered, most data will be reported as it pertains to any Title I/Chapter 1 Program as well as separated by instructional area. Tables 7 and 8 show the numbers of years of service and treatment in reading and mathematics programs. The average numbers of years of involvement in the resulting six categories are displayed in Table 9. Note that Table 9 excludes those pupils who had zero years of involvement of the type designated.

Table 6

Number of Years of Program Service and Treatment
of 1988 Graduates

No. of Years	Program Service N	Program Service %	Program Treatment N	Program Treatment %
0	2331	72.1	2435	75.3
1	390	12.1	396	12.2
2	231	7.1	205	6.3
3	119	3.7	106	3.3
4	88	2.7	53	1.6
5	41	1.3	19	.6
6	17	.5	14	.4
7	13	.4	5	.2
8	3	.1	1	.0
9	1	.0		
Total	3234	100.0	3234	100.0

Table 7

Number of Years of Reading Service and Treatment
of 1988 Graduates

No. of Years	Reading Service N	Reading Service %	Reading Treatment N	Reading Treatment %
0	2367	73.1	2464	76.2
1	373	11.5	386	11.9
2	222	6.9	197	6.1
3	117	3.6	99	3.1
4	83	2.6	51	1.6
5	39	1.2	17	.5
6	16	.5	15	.5
7	14	.4	4	.1
8	2	.1	1	.0
9	1	.0		
Total	3234	100.0	3234	100.0

Table 8

Number of Years of Mathematics
Service and Treatment of 1988 Graduates

No. of Years	Mathematics Service N	%	Mathematics Treatment N	%
0	3092	95.6	3130	96.8
1	134	4.1	98	3.0
2	8	.2	6	.2
Total	3234	100.0	3234	100.0

Table 9

Average Years of Involvement
of 1988 Graduates by Program Category

Program Category	Number of Pupils	Average Number of Years	Standard Deviation
Program Service	903	2.2	1.5
Program Treatment	799	2.0	1.3
Reading Service	867	2.2	1.5
Reading Treatment	770	1.9	1.3
Mathematics Service	142	1.1	.2
Mathematics Treatment	104	1.1	.2

Beginning in the 1981 school year, Columbus Public Schools used a middle school (as opposed to junior high school) grade organization. With the exception of six sixth-grade students in 1980, all program involvement of the graduates in this study took place under the elementary and middle school structure. Tables 10 and 11 are provided as an overview of the combinations of program involvement at elementary and middle school levels. Notice that 106 pupils received both reading and mathematics service while 75 received treatment in both instructional areas. The reader is cautioned to view each table as 3 columns of information separated by instructional area of involvement. This will avoid the appearance of miscalculation in the Middle Only entries of Table 10, for example. Four of the 146 pupils whose only reading service was during middle school received mathematics service only at the elementary level. Two others received both elementary and middle school service in mathematics. Hence, all six are tabulated in the Elementary & Middle level of the Reading or Mathematics column. Similar circumstances account for the 5 pupil difference in the Middle Only level of Table 11.

Table 10

Level and Instructional Area of
Title I/Chapter 1 Program Service of 1988 Graduates

Level	Reading N	Reading %	Mathematics N	Mathematics %	Reading or Mathematics N	Reading or Mathematics %
Elementary Only	463	53.4	140	98.6	499	55.3
Middle Only	146	16.8			140	15.5
Elementary & Middle	258	29.8	2	1.4	264	29.2
Total	867	100.0	142	100.0	903	100.0

Table 11

Level and Instructional Area of
Title I/Chapter 1 Program Treatment of 1988 Graduates

Level	Reading N	Reading %	Mathematics N	Mathematics %	Reading or Mathematics N	Reading or Mathematics %
Elementary Only	441	57.3	103	99.0	470	58.8
Middle Only	137	17.8			132	16.5
Elementary & Middle	192	24.9	1	1.0	197	24.7
Total	770	100.0	104	100.0	799	100.0

As one might expect given the range of birth years of the graduates who received program service, pupils involved in Title I/Chapter 1 were in as many as six different grades during a single year of the study. Patterns of service and treatment were devised under the assumption that the years during which a pupil was involved in programs are less informative than are the grade levels of a pupil at the times of involvement. Thus, a pupil served as a third-grader in 1978 is tabulated the same as one served as a third-grader in 1980. Also, the first is tabulated differently from a pupil served as a first-grader in 1978. Categories based on grade level as opposed to calendar year substantially reduced the number of distinct patterns of service and treatment, yet the number of pupils with most of the resulting patterns is so small as to be of limited interest. The patterns exhibited by more than one percent of served or treated pupils are displayed in Table 12, and complete tabulations are provided in Tables A-1 and A-2 of the Appendix.

Table 12

Patterns of Title I/Chapter 1 Program Involvement
of 1988 Graduates Occurring at Least One Percent of the Time
in Descending Order of Frequency

Program Service			Program Treatment		
Grade Pattern	N	%	Grade Pattern	N	%
6	82	9.1	1	84	10.5
1	66	7.3	6	82	10.3
5	56	6.2	K	54	6.8
4	48	5.3	5	45	5.6
K	48	5.3	4	43	5.4
K 1	34	3.8	2	34	4.3
4 5	29	3.2	K 1	28	3.5
2	28	3.1	3	25	3.1
3	25	2.8	5 6	25	3.1
5 6	24	2.7	4 5	24	3.0
7	21	2.3	7	16	2.0
1 2	17	1.9	6 7	14	1.8
8	16	1.8	8	13	1.6
6 7	15	1.7	1 2	12	1.5
K 1 2	10	1.1	K 1 2	8	1.0
4 5 6	10	1.1			
1 3	10	1.1			

To consolidate patterns to more meaningful categories, elementary and middle school patterns were tabulated separately. Tables 13 through 24 display patterns of service and treatment for reading programs, mathematics programs, and programs across instructional areas. The patterns are grouped by the number of years of involvement that the pupil experienced while in Columbus Public Schools. Each pattern is followed by the number of pupils exhibiting that pattern and the percent that is of the pupils in that table. Subtotals for the different numbers of years of involvement are supplied as well.

The reader who is interested in, for example, subsequent program service of the 13 pupils with elementary service pattern K 1 2 (Table 17) can refer to Table A-1 in the appendix. There one learns that 10 of the pupils had no program service during middle school (column 2, line 1) while 1 had program service in grade 6 and 2 had program service in grade 7 (column 3, lines 7 and 8). Follow-up of program treatment can be accomplished in the same fashion using appendix Table A-2.

Table 13

Patterns of Title I/Chapter 1
Elementary Reading Service

Grade Pattern	No. of Pupils	Percent of Pupils
K	61	8.5
1	83	11.5
2	34	4.7
3	42	5.8
4	51	7.1
5	76	10.5
	347	48.1
K K	1	.1
K 1	36	5.0
K 2	9	1.2
K 3	5	.7
K 4	6	.8
K 5	5	.7
1 1	4	.6
1 2	25	3.5
1 3	13	1.8
1 4	9	1.2
1 5	5	.7
2 2	2	.3
2 3	15	2.1
2 5	4	.6
3 3	1	.1
3 4	8	1.1
3 5	9	1.2
4 5	41	5.7
	198	27.5
K 1 1	2	.3
K 1 2	14	1.9
K 1 3	5	.7
K 1 4	4	.6
K 1 5	1	.1
K 2 3	5	.7
K 3 4	1	.1
K 4 5	4	.6
1 1 2	1	.1
1 2 3	12	1.7
1 2 4	3	.4
1 2 5	2	.3
1 3 4	1	.1
1 3 5	2	.3
1 4 5	5	.7
2 3 4	5	.7
2 3 5	2	.3
2 4 5	3	.4
2 5 5	1	.1
3 4 5	13	1.8
	86	11.9
K 1 1 2	1	.1
K 1 1 4	1	.1
K 1 2 3	12	1.7
K 1 2 4	2	.3
K 1 2 5	4	.6
K 1 3 4	4	.6
K 1 3 5	1	.1
K 1 4 4	1	.1
K 1 4 5	2	.3
K 2 2 3	1	.1
K 2 3 4	2	.3
K 2 4 5	2	.3
K 3 4 5	3	.4
1 1 2 3	1	.1
1 1 2 4	1	.1
1 1 3 4	1	.1
1 2 3 4	1	.1
1 2 3 5	2	.3
1 2 4 5	4	.6
1 3 4 5	6	.8
2 2 3 5	1	.1
2 3 4 5	6	.8
	59	8.2
K 1 2 2 3	1	.1
K 1 2 3 4	5	.7
K 1 2 3 5	4	.6
K 1 2 4 5	2	.3
K 1 3 4 5	4	.6
K 2 2 3 4	1	.1
K 2 2 4 5	1	.1
K 2 3 3 5	1	.1
K 2 3 4 5	2	.3
1 1 2 3 5	1	.1
1 2 3 4 5	3	.4
1 2 4 4 5	1	.1
2 3 3 4 5	1	.1
	27	3.7
K 1 2 2 3 5	1	.1
K 1 2 3 4 4	1	.1
K 1 2 3 4 5	1	.1
1 2 3 4 4 5	1	.1
	4	.6
Total	721	100.0

Table 14

Patterns of Title I/Chapter 1
Elementary Reading Treatment

Grade Pattern	No. of Pupils	Percent of Pupils
K	66	10.4
1	99	15.6
2	40	6.3
3	40	6.3
4	47	7.4
5	65	10.3
	357	56.4
K K	1	.2
K 1	30	4.7
K 2	8	1.3
K 3	5	.8
K 4	7	1.1
K 5	3	.5
1 1	3	.5
1 2	18	2.8
1 3	9	1.4
1 4	7	1.1
1 5	5	.8
2 2	1	.2
2 3	9	1.4
2 4	1	.2
2 5	6	.9
3 4	5	.8
3 5	9	1.4
4 5	28	4.4
	155	24.5
K 1 1	1	.2
K 1 2	10	1.6
K 1 3	8	1.3
K 1 4	4	.6
K 1 5	2	.3
K 2 3	5	.8
K 3 4	3	.5
K 3 5	1	.2
K 4 5	2	.3
1 2 3	11	1.7
1 2 4	5	.8
1 2 5	1	.2
1 3 4	3	.5
1 3 5	2	.3
1 4 5	5	.8
2 2 5	1	.2
2 3 4	2	.3
2 3 5	2	.3
2 4 5	4	.6
3 4 5	8	1.3
	80	12.6
K 1 2 3	6	.9
K 1 2 4	3	.5
K 1 2 5	1	.2
K 1 3 4	1	.2
K 2 4 5	1	.2
1 1 2 3	1	.2
1 1 2 4	1	.2
1 2 3 4	1	.2
1 2 3 5	1	.2
1 2 4 5	2	.3
1 3 4 5	3	.5
1 4 4 5	1	.2
2 2 3 4	1	.2
2 2 3 5	1	.2
2 3 4 5	3	.5
3 3 4 5	1	.2
	28	4.4
K 1 2 2 3	1	.2
K 1 2 3 4	3	.5
K 1 3 4 5	2	.3
K 2 2 4 5	1	.2
K 2 3 3 5	1	.2
K 2 3 4 5	1	.2
1 2 3 4 5	2	.3
	11	1.7
K 1 2 3 4 4	1	.2
1 2 3 4 4 5	1	.2
	2	.3
Total	633	100.0

Table 15

Patterns of Title I/Chapter 1
Elementary Mathematics Service

Grade Pattern	No. of Pupils	Percent of Pupils
4	67	47.2
5	69	48.6
	136	95.8
4 5	5	3.5
5 5	1	.7
	6	4.2
Total	142	100.0

Table 16

Patterns of Title I/Chapter 1
Elementary Mathematics Treatment

Grade Pattern	No. of Pupils	Percent of Pupils
4	42	40.4
5	57	54.8
	99	95.2
4 5	4	3.8
5 5	1	1.0
	5	4.8
Total	104	100.0

Table 17

Patterns of Title I/Chapter 1 Elementary Service

Grade Pattern	No. of Pupils	Percent of Pupils
K	60	7.9
1	79	10.4
2	33	4.3
3	38	5.0
4	65	8.5
5	95	12.5
	370	48.5
K K	1	.1
K 1	35	4.6
K 2	7	.9
K 3	4	.5
K 4	7	.9
K 5	5	.7
1 1	4	.5
1 2	24	3.1
1 3	13	1.7
1 4	9	1.2
1 5	8	1.0
2 2	2	.3
2 3	13	1.7
2 5	5	.7
3 3	1	.1
3 4	9	1.2
3 5	11	1.4
4 4	1	.1
4 5	48	6.3
	207	27.1
K 1 1	1	.1
K 1 2	13	1.7
K 1 3	4	.5
K 1 4	5	.7
K 1 5	1	.1
K 2 3	4	.5
K 2 4	1	.1
K 2 5	1	.1
K 3 4	1	.1
K 3 5	1	.1
K 4 5	4	.5
1 1 2	1	.1
1 2 3	11	1.4
1 2 4	4	.5
1 2 5	2	.3
1 3 4	1	.1
1 3 5	2	.3
1 4 5	6	.8
2 3 4	6	.8
2 3 5	2	.3
2 4 5	3	.4
2 5 5	1	.1
3 4 4	1	.1
3 4 5	13	1.7
4 5 5	1	.1
	90	11.8
K 1 1 2	1	.1
K 1 1 4	1	.1
K 1 1 5	1	.1
K 1 2 3	12	1.6
K 1 2 4	3	.4
K 1 2 5	4	.5
K 1 3 4	4	.5
K 1 3 5	2	.3
K 1 4 4	1	.1
K 1 4 5	2	.3
K 2 2 3	1	.1
K 2 3 4	2	.3
K 2 3 5	1	.1
K 2 4 5	2	.3
K 3 4 5	3	.4
1 1 2 3	1	.1
1 1 2 4	1	.1
1 1 3 4	1	.1
1 2 3 4	1	.1
1 2 3 5	3	.4
1 2 4 5	4	.5
1 3 4 5	6	.8
2 2 3 5	1	.1
2 3 4 5	7	.9
	65	8.5
K 1 2 2 3	1	.1
K 1 2 3 4	5	.7
K 1 2 3 5	4	.5
K 1 2 4 5	2	.3
K 1 3 4 5	4	.5
K 2 2 4 5	1	.1
K 2 3 3 5	1	.1
K 2 3 4 5	2	.3
1 1 2 3 5	1	.1
1 2 3 4 5	3	.4
1 2 4 4 5	1	.1
2 3 3 4 5	1	.1
	26	3.4
K 1 2 2 3 5	1	.1
K 1 2 3 4 4	1	.1
K 1 2 3 4 5	1	.1
K 2 2 3 4 5	1	.1
1 2 3 4 4 5	1	.1
	5	.7
Total	763	100.0

Table 18

Patterns of Title I/Chapter 1 Elementary Treatment

Grade Pattern	No. of Pupils	Percent of Pupils
K	63	9.4
1	96	14.4
2	39	5.8
3	36	5.4
4	54	8.1
5	82	12.3
	370	55.5
K K	1	.1
K 1	30	4.5
K 2	6	.9
K 3	5	.7
K 4	7	1.0
K 5	5	.7
1 1	3	.4
1 2	18	2.7
1 3	9	1.3
1 4	7	1.0
1 5	7	1.0
2 2	1	.1
2 3	8	1.2
2 4	1	.1
2 5	7	1.0
3 4	8	1.2
3 5	10	1.5
4 4	1	.1
4 5	36	5.4
	170	25.5
K 1 1	1	.1
K 1 2	10	1.5
K 1 3	7	1.0
K 1 4	4	.6
K 1 5	2	.3
K 2 3	4	.6
K 2 4	1	.1
K 2 5	1	.1
K 3 4	3	.4
K 3 5	1	.1
K 4 5	3	.4
1 2 3	10	1.5
1 2 4	5	.7
1 2 5	1	.1
1 3 4	3	.4
1 3 5	2	.3
1 4 5	6	.9
2 2 5	1	.1
2 3 4	2	.3
2 3 5	2	.3
2 4 5	4	.6
3 4 5	8	1.2
4 5 5	1	.1
	82	12.3

Grade Pattern	No. of Pupils	Percent of Pupils
K 1 2 3	6	.9
K 1 2 4	3	.4
K 1 2 5	1	.1
K 1 3 4	1	.1
K 1 3 5	1	.1
K 2 3 5	1	.1
K 2 4 5	1	.1
1 1 2 3	1	.1
1 1 2 4	1	.1
1 2 3 4	1	.1
1 2 3 5	2	.3
1 2 4 5	2	.3
1 3 4 5	3	.4
1 4 4 5	1	.1
2 2 3 5	1	.1
2 3 4 5	4	.6
3 3 4 5	1	.1
	31	4.6
K 1 2 2 3	1	.1
K 1 2 3 4	3	.4
K 1 3 4 5	2	.3
K 2 2 4 5	1	.1
K 2 3 3 5	1	.1
K 2 3 4 5	1	.1
1 2 3 4 5	2	.3
2 2 3 4 5	1	.1
	12	1.8
K 1 2 3 4 4	1	.1
1 2 3 4 4 5	1	.1
	2	.3
Total	667	100.0

Table 19

Patterns of Title I/Chapter 1
Middle School Reading Service

Grade Pattern	No. of Pupils	Percent of Pupils
6	215	53.2
7	63	15.6
8	26	6.4
	304	75.2
6 6	8	2.0
6 7	61	15.1
6 8	11	2.7
7 7	1	.2
7 8	7	1.7
	88	21.8
6 6 7	3	.7
6 6 8	1	.2
6 7 7	2	.5
6 7 8	4	1.0
	10	2.5
6 6 6 8	1	.2
6 6 7 8	1	.2
	2	.5
Total	404	100.0

Table 20

Patterns of Title I/Chapter 1
Middle School Reading Treatment

Grade Pattern	No. of Pupils	Percent of Pupils
6	182	55.3
7	54	16.4
8	23	7.0
	259	78.7
6 6	8	2.4
6 7	42	12.8
6 8	9	2.7
7 8	5	1.5
	64	19.5
6 6 7	2	.6
6 7 7	1	.3
6 7 8	2	.6
	5	1.5
6 6 6 8	1	.3
	1	.3
Total	329	100.0

Table 21

Patterns of Title I/Chapter 1
Middle School Mathematics Service

Grade Pattern	No. of Pupils	Percent of Pupils
6	2	100.0
Total	2	100.0

Table 22

Patterns of Title I/Chapter 1
Middle School Mathematics Treatment

Grade Pattern	No. of Pupils	Percent of Pupils
6	1	100.0
Total	1	100.0

Table 23

Patterns of Title I/Chapter 1
Middle School Service

Grade Pattern	No. of Pupils	Percent of Pupils
6	215	53.2
7	63	15.6
8	26	6.4
	304	75.2
6 6	8	2.0
6 7	61	15.1
6 8	11	2.7
7 7	1	.2
7 8	7	1.7
	88	21.8
6 6 7	3	.7
6 6 8	1	.2
6 7 7	2	.5
6 7 8	4	1.0
	10	2.5
6 6 6 8	1	.2
6 6 7 8	1	.2
	2	.5
Total	404	100.0

Table 24

Patterns of Title I/Chapter 1
Middle School Treatment

Grade Pattern	No. of Pupils	Percent of Pupils
6	182	55.3
7	54	16.4
8	23	7.0
	259	78.7
6 6	8	2.4
6 7	42	12.8
6 8	9	2.7
7 8	5	1.5
	64	19.5
6 6 7	2	.6
6 7 7	1	.3
6 7 8	2	.6
	5	1.5
6 6 6 8	1	.3
	1	.3
Total	329	100.0

Summary

Nearly one fourth (27.4%) of all 1988 graduates of Columbus Public Schools received Title I/Chapter 1 services during their educational careers, and nearly one fourth (24.7%) received program treatment. For the 903 pupils who were served by a program, the average of their years of involvement was 2.2 years and reached a maximum of nine years. More than half of those served were served for two or more years, and almost one third were served for at least three years. For the 799 pupils who received program treatment, the average of their years of treatment was 2.0. Again, more than half of these pupils received treatment during more than one year while one fourth received three or more years of program treatment.

Patterns of program service and treatment varied greatly. Among the factors contributing to this are the following: program availability changed from year to year, some pupils were retained in grade, and graduates were in different grades from each other in a given year. Almost one tenth of all graduates who received program services were served only in grade 6 with service only in grade 1 being the next most common. These occurred 82 and 66 times, respectively and together comprise 16.4% of the graduates served. Their ranks were reversed in the category of program treatment. Students receiving treatment during grade 1 numbered 84, followed by 82 with treatment during grade 6. Together, these account for 20.8% of the graduates receiving program treatment. Each pattern consisting of a single grade was among the 13 most common for both program service and program treatment. The most often experienced grade pattern including more than one year was a combination of kindergarten and grade 1. This service pattern occurred 34 times which accounted for 3.8% of the 903 graduates who received program services. Kindergarten and grade one treatment was received by 28 of the graduates, comprising 3.5% of the 799 graduates who received program treatment.

Appendix

Table A-1

Patterns of Title I/Chapter 1 Service

Grade Pattern	No. of Pupils
K	48
1	66
2	28
3	25
4	48
5	56
6	82
7	21
8	16
	390
K K	1
K 1	34
K 2	6
K 3	2
K 4	3
K 5	3
K 6	8
K 7	1
K 8	2
1 1	3
1 2	17
1 3	10
1 4	5
1 5	5
1 6	9
1 8	1
2 3	7
2 5	2
2 6	2
2 7	1
3 4	6
3 5	4
3 6	2
3 7	5
3 8	2
4 5	29
4 6	7
4 7	5
5 6	24
5 7	4
5 8	1
6 6	1
6 7	15
6 8	1
7 8	3
	231

Grade Pattern	No. of Pupils
K 1 2	10
K 1 3	2
K 1 4	2
K 1 7	1
K 2 3	2
K 2 6	1
K 3 4	1
K 3 6	2
K 4 5	1
K 4 6	1
K 4 7	2
K 5 8	1
K 6 7	1
1 1 2	1
1 1 6	1
1 2 3	9
1 2 4	2
1 2 5	2
1 2 6	5
1 2 7	1
1 3 4	1
1 3 6	1
1 3 7	1
1 4 5	3
1 4 6	3
1 5 6	1
1 5 7	2
1 6 6	1
1 6 7	1
1 6 8	1
2 2 6	1
2 2 7	1
2 3 4	3
2 3 6	3
2 3 7	1
2 5 6	2
2 6 6	1
3 3 7	1
3 4 5	6
3 4 6	1
3 5 6	5
3 5 7	1
3 6 7	2
3 7 8	2
4 5 5	1
4 5 6	10
4 5 7	2
4 6 6	1
4 6 8	2
4 7 7	1
5 6 6	1
5 6 7	6
5 7 8	1
6 7 8	1
	119

Table A-1 (continued)

Patterns of Title I/Chapter 1 Service

Grade Pattern	No. of Pupils
K 1 1 2	1
K 1 1 4	1
K 1 1 5	1
K 1 2 3	8
K 1 2 4	1
K 1 2 5	2
K 1 2 6	1
K 1 2 7	2
K 1 3 4	1
K 1 3 6	1
K 1 4 4	1
K 1 4 5	1
K 1 4 6	1
K 1 4 7	1
K 2 2 3	1
K 2 3 6	1
K 2 3 8	1
K 2 4 7	1
K 3 4 5	1
K 3 5 6	1
K 4 5 7	1
K 4 6 6	1
K 5 6 8	1
1 1 2 3	1
1 1 2 4	1
1 1 3 4	1
1 2 3 4	1
1 2 3 5	2
1 2 3 6	2
1 2 4 5	3
1 2 4 6	2
1 2 6 7	1
1 3 4 5	5
1 3 5 6	1
1 3 6 7	1
1 4 6 7	1
2 2 3 5	1
2 3 4 5	4
2 3 4 6	1
2 3 5 6	2
2 3 6 7	2
2 4 5 6	3
2 5 5 6	1
2 5 6 8	1
2 6 7 8	1
3 4 4 6	1
3 4 5 6	4
3 4 5 7	2
3 4 6 7	1
3 5 6 7	1
4 4 6 7	1
4 5 6 7	5
4 5 6 8	1
4 6 7 8	1
5 6 7 8	1
	88

Grade Pattern	No. of Pupils
K 1 1 6 7	1
K 1 2 2 3	1
K 1 2 3 4	2
K 1 2 3 5	1
K 1 2 3 6	3
K 1 2 4 5	2
K 1 2 4 6	2
K 1 2 5 7	2
K 1 3 4 6	1
K 1 3 4 7	1
K 1 3 5 6	2
K 1 3 6 7	1
K 1 4 6 8	1
K 1 5 6 8	1
K 2 3 3 5	1
K 2 3 4 6	1
K 2 3 4 8	1
K 2 4 5 6	1
K 2 5 6 7	1
K 3 4 5 6	2
K 4 5 6 6	1
K 4 5 6 7	1
1 2 3 5 6	1
1 3 5 7 8	1
1 4 5 6 7	1
1 4 5 6 8	1
2 3 4 5 6	1
2 3 4 5 8	1
2 3 4 6 7	1
3 4 5 6 7	1
3 4 6 7 7	1
4 5 6 6 7	1
5 6 6 6 8	1
	41

Grade Pattern	No. of Pupils
K 1 2 3 4 6	1
K 1 2 3 5 6	1
K 1 2 3 5 7	1
K 1 2 3 6 7	1
K 1 3 4 5 6	1
K 1 3 4 6 7	1
K 1 4 5 6 7	1
K 2 2 4 5 7	1
K 2 3 5 6 7	1
1 2 3 4 5 6	3
1 2 4 5 6 7	1
1 3 4 5 6 7	1
1 4 5 6 6 7	1
2 3 4 5 6 7	1
2 3 4 6 7 7	1
	17

Table A-1 (continued)

Patterns of Title I/Chapter 1 Service

Grade Pattern	No. of Pupils
K 1 2 2 3 5 6	1
K 1 2 3 4 4 6	1
K 1 2 3 4 6 7	1
K 1 2 3 5 6 7	1
K 1 3 4 5 6 7	2
K 2 3 4 5 6 7	2
K 2 4 5 6 6 8	1
1 1 2 3 5 6 8	1
1 2 3 4 4 5 7	1
1 2 4 4 5 6 7	1
2 3 3 4 5 6 6	1
	13

Grade Pattern	No. of Pupils
K 1 2 3 4 5 6 7	1
K 1 3 4 5 6 6 7	1
K 2 2 3 4 5 6 7	1
	3
K 1 2 3 4 6 6 7 8	1
	1
Total	903

Table A-2

Patterns of Title I/Chapter 1 Treatment

Grade Pattern	No. of Pupils
K	54
1	84
2	34
3	25
4	43
5	45
6	82
7	16
8	13
	396
K K	1
K 1	28
K 2	5
K 3	5
K 4	4
K 5	2
K 6	6
K 7	1
K 8	1
1 1	2
1 2	12
1 3	7
1 4	6
1 5	3
1 6	7
1 8	1
2 3	6
2 4	1
2 5	3
2 6	1
3 4	5
3 5	4
3 6	3
3 7	4
3 8	2
4 5	24
4 6	4
4 7	3
4 8	2
5 6	25
5 7	7
6 6	1
6 7	14
6 8	1
7 8	4
	205

Grade Pattern	No. of Pupils
K 1 1	1
K 1 2	8
K 1 3	4
K 1 4	3
K 1 5	1
K 1 7	1
K 2 3	2
K 2 6	1
K 3 4	2
K 4 5	2
K 4 7	2
K 5 6	1
K 6 7	1
1 1 6	1
1 2 3	7
1 2 4	2
1 2 5	1
1 2 6	5
1 2 7	1
1 3 4	3
1 3 7	2
1 4 5	2
1 5 6	2
1 5 7	1
1 6 7	3
1 6 8	1
2 2 5	1
2 2 7	1
2 3 4	1
2 3 5	1
2 3 6	1
2 3 7	1
2 4 5	1
2 5 6	3
2 6 6	1
2 6 7	2
3 4 5	6
3 4 6	1
3 4 7	2
3 5 6	5
3 6 7	1
3 7 8	1
4 4 6	1
4 5 5	1
4 5 6	5
4 5 7	3
4 6 7	1
4 6 8	1
5 6 6	1
5 6 7	2
5 6 8	1
6 7 8	1
	106

Table A-2 (continued)

Patterns of Title I/Chapter 1 Treatment

Grade Pattern	No. of Pupils	Grade Pattern	No. of Pupils
K 1 2 3	3	K 1 2 2 3	1
K 1 2 4	2	K 1 2 3 6	2
K 1 2 5	1	K 1 3 5 6	1
K 1 2 7	2	K 1 3 6 7	1
K 1 3 4	1	K 1 4 6 6	1
K 1 3 6	1	K 2 3 3 5	1
K 1 3 7	1	K 2 3 5 7	1
K 1 5 7	1	K 2 4 5 6	1
K 1 6 8	1	K 3 5 6 7	1
K 2 3 8	2	1 2 3 4 6	1
K 2 4 7	1	1 3 4 5 6	1
K 2 5 6	1	1 4 5 6 7	2
K 3 4 6	1	1 4 5 6 8	1
K 4 5 7	1	2 2 3 5 6	1
K 4 6 6	1	2 3 4 5 8	1
K 5 6 7	1	2 4 5 6 6	1
K 5 6 8	1	5 6 6 6 8	1
1 1 2 3	1		19
1 1 2 4	1		
1 2 3 5	2	K 1 2 3 4 6	1
1 2 3 6	3	K 1 2 3 6 7	1
1 2 4 5	2	K 1 2 4 6 7	1
1 2 4 6	3	K 1 3 4 5 6	2
1 3 4 5	2	K 2 2 4 5 7	1
1 3 5 6	1	1 2 3 4 5 6	2
1 3 5 8	1	1 4 4 5 6 7	1
1 4 6 7	1	1 4 5 6 6 7	1
1 5 6 8	1	2 3 4 5 6 7	2
2 3 4 5	1	2 3 4 6 7 7	1
2 3 5 6	1	3 3 4 5 6 6	1
2 4 5 6	2		14
2 5 6 8	1		
2 6 7 8	1	K 1 2 3 4 4 6	1
3 4 5 6	2	K 1 2 3 4 6 7	1
3 5 6 7	1	K 2 3 4 5 6 7	1
4 5 6 6	1	1 2 3 4 4 5 7	1
4 5 6 7	3	2 2 3 4 5 6 7	1
	53		5
		K 1 2 3 4 6 6 7	1
			1
		Total	799